

WHAT IS CLAIMED IS:

1. A chip type solid electrolytic capacitor comprising:
 - a capacitor element;
 - 5 a packaging resin covering said capacitor element and having a mount surface and a side surface adjacent to said mount surface; and a terminal electrically connected to said capacitor element and coupled to said packaging resin, said terminal extending along said mount surface and said side surface to have an outer surface exposed from said packaging resin
 - 10 and to have an inner surface opposite to said outer terminal surface, said inner surface having a stepwise shape formed by forging.
2. The chip type solid electrolytic capacitor according to claim 1, wherein said inner surface has a first step adjacent to said side surface and a second step apart from said side surface, said first step being higher than said 15 second step in a height from said mount surface.
3. The chip type solid electrolytic capacitor according to claim 2, wherein said capacitor element has an anode lead extending towards said side surface, said terminal being connected as an anode terminal to said anode lead.
4. The chip type solid electrolytic capacitor according to claim 3,
 - 20 wherein said capacitor element has a peripheral surface, said anode lead and said peripheral surface having a specific distance therebetween in said height, said first and said second steps having a particular distance greater than said specific distance.
5. The chip type solid electrolytic capacitor according to claim 2,
 - 25 wherein said capacitor element has a cathode layer, said terminal being connected as a cathode terminal to said cathode layer.
6. The chip type solid electrolytic capacitor according to claim 5, wherein said cathode terminal has a film formed on at least a part thereof, said

film including at least one of Ag (silver), Au (gold), Cu (copper), and Pd (palladium).

7. The chip type solid electrolytic capacitor according to claim 5, wherein said cathode layer is connected to said cathode terminal by using 5 conductive adhesive including Ag.

8. The chip type solid electrolytic capacitor according to claim 1, wherein said terminal has an exposed surface exposed at said side surface and defined between two edges substantially perpendicular to said mount surface, said exposed surface having concave portions which are recessed from said 10 edges, respectively.

9. The chip type solid electrolytic capacitor according to claim 8, wherein each of said concave portions is a wedge-shaped notch.

10. The chip type solid electrolytic capacitor according to claim 8, wherein each of said concave portions is a semicircle notch.

15 11. The chip type solid electrolytic capacitor according to claim 1, wherein the terminal has an exposed surface exposed at said side surface and defined between said mount surface and an edge opposite to said mount surface, said exposed surface having convex portions in the vicinity of said edge.

20 12. The chip type solid electrolytic capacitor according to claim 1, wherein said terminal has an exposed surface exposed at said side surface, said exposed surface being of a trapezoid which has a first edge adjacent to said mount surface and a second edge which is opposite to said first edge and longer than said first edge.

25 13. A chip type solid electrolytic capacitor comprising:
a capacitor element having an anode lead and a cathode layer;
a packaging resin covering said capacitor element and having a mount surface and side surfaces adjacent to said mount surface and opposite to each

other;

an anode terminal electrically connected to said anode lead and coupled to said packaging resin; and

5 a cathode terminal electrically connected to said cathode layer and coupled to said packaging resin, each of said anode terminal and said cathode terminal extending along said mount surface and each of said side surfaces to have an outer surface exposed from said packaging resin and to have an inner surface opposite to said outer surface, said inner surface having a stepwise shape formed by forging.

10 14. A method of manufacturing a chip type solid electrolytic capacitor comprising a capacitor element having an anode lead and a cathode layer, a packaging resin covering said capacitor element and having a mount surface and side surfaces adjacent to said mount surface and opposite to each other, an anode terminal electrically connected to said anode lead and coupled to said packaging resin, and a cathode terminal electrically connected to said cathode layer and coupled to said packaging resin, said method comprising:

 preparing a lead frame having an anode terminal-forming portion and a cathode terminal-forming portion;

15 forging to form a stepwise shape in a part of said anode terminal-forming portion;

 connecting said anode lead to said anode terminal-forming portion;

 connecting said cathode layer to said cathode terminal-forming portion;

 covering said capacitor element with a packaging resin excepting a part of said anode terminal-forming portion and a part of said cathode terminal-forming portion; and

20 cutting out said chip type solid electrolytic capacitor from said lead frame.

15. The method according to claim 14, further comprising, before said cathode layer is connected to said cathode terminal-forming portion, forging to form a stepwise shape in a part of said cathode terminal-forming portion.

16. The method according to claim 14, further comprising, before said
5 anode terminal-forming portion is formed with said stepwise shape, applying an electrical-insulation resin to said part of said anode terminal-forming portion.

17. The method according to claim 15, further comprising, before said cathode terminal-forming portion is formed with said stepwise shape, forming a film including at least one of Ag (silver), Au (gold), Cu (copper), and Pd
10 (palladium) on said part of said cathode terminal-forming portion.

18. The method according to claim 14, wherein the anode terminal connecting step includes:

forming a protruding portion on said anode terminal-forming portion;
arranging said anode lead with anode lead in contact with said
15 protruding portion; and

fixing and electrically connecting said anode lead on said anode terminal-forming portion by laser welding.

19. The method according to claim 14, wherein the anode terminal connecting step includes:

20 forming two protruding portions on said anode terminal-forming portion;
arranging said anode lead between said protruding portions; and
fixing and electrically connecting said anode lead on said anode
terminal-forming portion by laser welding.

20. The method according to claim 14, wherein the anode terminal
25 connecting step includes:

contacting said anode lead with a flat surface presented or a V-groove portion formed on said anode terminal-forming portion; and

fixing and electrically connecting said anode lead on said anode terminal-forming portion by resistance welding.